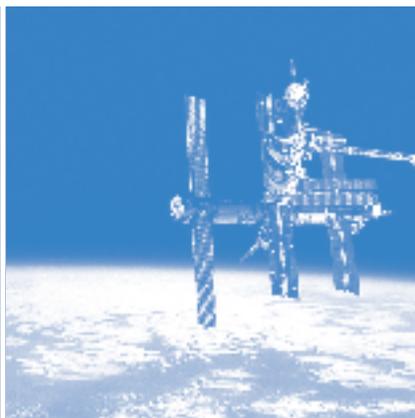


A strategic approach to telecom cost optimization— the path to business transformation



deeper

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Changes in the telecom industry in the past 20 years have led to several waves of cost reduction and optimization.

Introduction

In the telecom market of the future, a key source of service provider competitive advantage will be business agility and flexibility through cost structure optimization. To achieve this, today's telecom executives are challenged not only to develop a more comprehensive and enterprisewide approach to business transformation, but also to finance a series of cost optimization initiatives that will achieve the overall transformation goals of the corporation. In support of these objectives, IBM has developed a comprehensive telecom industry offering that links these cost optimization initiatives to business processes and outcomes. By taking advantage of IBM's solution and approach, telecom executives can embark on a self-funding, technology-fueled cost transformation that has the potential to lead to quantifiable business benefits.

The three waves of telecom cost reduction and optimization

During the last two decades, service providers around the world have been through several waves of cost reduction and operational efficiency improvements. (See Figure 1.) There are important factors to note about each of these waves of change: The theme of cost reduction in each wave was consistent across markets, despite the fact that the waves occurred at different points in time and in different regulatory environments. Different markets use and have used different strategies to accomplish the goals of cost optimization. As markets have become more mature and sophisticated, the time frame for each wave of change has been compressed, largely because each wave has demanded a more urgent response. Finally, each wave of change has required an increasingly efficient use of technology, which has put pressure on service providers to enhance their understanding of how their business structures, processes and technology infrastructures collectively drive corporate value.

Figure 1. Waves of service provider cost reduction and optimization

	Wave 1: Trimming the fat	Wave 2: Reengineering	Wave 3: Becoming agile
Approach	Cut budgets in each department Departmental focus	Break functional silos Process redesign Process focus	Focus on value add: use partners and "variabilize" costs Industry Partner focus
Barriers to overcome	Lack of vision. Individual inertia	Unclear management chain of command. Departmental fiefdoms, technical stovepipe	Legacy OSS/BSS system integration, lack of common approaches, new business models
Enablers	Accounting systems	Enterprise resource planning, integrated packages	Business process middleware, on demand applications, process standards, Web services
Outcome	Becoming commercial: - know costs - know revenue	Becoming competitive: - cross functional - process based	Becoming agile: - reduced time to change - reduced cost of write-off
	Cost reduction		Cost optimization

OSS (Operation Support Systems)
BSS (Business Support Systems)

Source: IBM Business Consulting Services analysis

The three waves of telecom cost reduction and optimization are: trimming the fat, reengineering and becoming agile.

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Trimming the fat

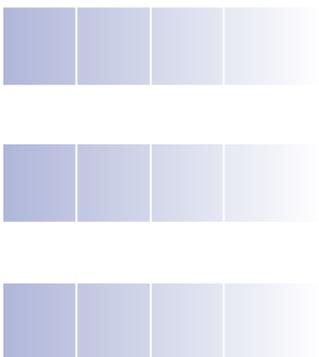
In the late 1980s, many telecom markets made their first efforts to deregulate, which exposed many of the weaknesses and inflexibilities of monopolistic, government-owned and government-regulated telecom businesses. In fact, the catalyst for cost reduction in many markets at the time was telecom deregulation, which revealed significant operational inefficiencies across the telecom sector. As a result the first wave of cost reduction was about trimming the fat from telecom organizations, which typically focused on improving accounting measures, to get a better understanding of cost and revenue drivers, with the aim of identifying the most critical areas of the business for cost savings.

Reengineering

As the telecom industry matured into the mid- to late-1990s, a new wave of cost reduction began. Around the world, telecom reform, which was designed to foster competition and technology adoption, forced many service providers to reprioritize business reengineering as a core component of their cost optimization initiatives. The goal was to become more competitive (or rather more resilient to competitive forces) by establishing cross-functional capabilities and process-based improvements that would allow larger, integrated telecoms to compete more effectively with new, emerging and competitive service providers.

Becoming agile

The challenge to service providers today is far more complicated than the cost reduction imperatives of the 1980s and '90s. Service providers today need to improve business flexibility and agility across their organizations from business strategy and operations to network and overall financial performance. Furthermore, every cost savings initiative needs to translate into enhanced financial performance, requiring in-depth understanding of service provider cost structures; how different initiatives interrelate, including what cost components can be "variabilized", to enhance responsiveness to revenue opportunities or demand fluctuations. Consequently, cost optimization today requires fresh, radical approaches to transform telecom organizations and position service providers optimally in the market place.



The two "agility" strategies seek to fix the structural problems of the business model at the "macro" level and stem the rise in product- and customer-based costs at the "micro" level.

Executives must create a comprehensive, enterprisewide approach to cost optimization.

The global telecom business is now a few years into this third wave of cost optimization, and two main "agility" strategies have emerged:

- Restructure the business model to enhance responsiveness to changing market conditions
- Match service provider operating costs with specific customers or products and reduce operating costs associated with specific products or customers.

These two strategies are the basis for telecom cost optimization today, with the aim of reducing telecom service providers' overall cost bases, and to ensure maximum flexibility to respond to changes in the marketplace. Traditional telecom business models have been unable to respond to the rapid pace of change of the sector in recent years, which has sparked a rise in overall telecom service provider operating costs.*

Developing a cost optimization strategy for today's market

Although service providers today are well aware of the need for renewed focus on cost optimization, they are still faced with key executive-level challenges:

- Determine how best to address business-wide structural problems through specific process-based initiatives
- Identify sources of funds to finance the transformation process, against scarce investment capital being available and focused on the telecom sector.

This reality has put pressure on telecom executives to create a comprehensive, enterprisewide approach to their cost optimization efforts, even though the full process of cost transformation may be completed incrementally over time. Furthermore, telecom executives must prioritize their cost optimization initiatives carefully, and focus on those differentiating capabilities that drive the greatest early and sizable returns for the business.

*Note: Operating expense growth for wireline service providers between 1998 and 2002 was slow, but operating expense growth for wireless service providers over the same period was very high. Wireline operating expenses have grown at a 1.9% 5-year CAGR, a growth rate higher than the revenue growth rate. Wireless operating expenses have grown at a 21.9% 5-year CAGR, which has kept pace with revenue growth. The sample set for wireline service providers includes: Alltel, AT&T, BellSouth, Brasil Telecom, BT Group, China Telecom, Deutsche Telekom, France Telecom, Japan Telecom, KDDI, KT Corp, NTT, OTE, Portugal Telecom, Qwest, SBC, Sprint FON, Swisscom, Telecom Italia, Telefonica, Telekomunikacja Polska, Telenor, TeleNorteLeste, TeliaSonera, TelMex, Telstra, TDC and Verizon. The sample set for wireless service providers includes: AT&T Wireless, Cable & Wireless, China Mobile, China Unicom, Cingular, KT Freetel, mmO2, Nextel, NTT DoCoMo, Orange, SingTel, SK Telecom, Sprint PCS, Telecom Italia Mobile and Vodafone. Company Reports; IBM Institute for Business Value (IBV) Analysis.

Figure 2. The cost reduction top-down approach

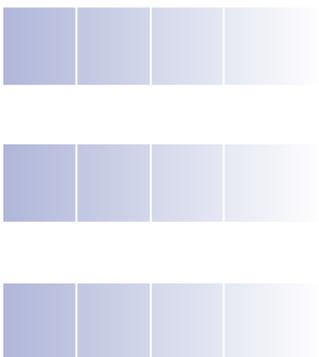


COGS (Cost of Goods Sold expenses)
 SG&A (Selling General and Administrative expenses)
 D&A (Depreciation and Amortization expenses)
 IBM Business Consulting Services analysis uses gaps in financial performance drivers to determine potential for improving business processes/activities/tasks.

Source: IBM Business Consulting Services analysis

By linking business processes to costs using a business outcomes/cost optimization approach, each initiative creates cost savings that can be reinvested in the next initiative.

IBM has developed a methodology for tackling the challenges of cost optimization that analyzes telecom service provider cost structures and attempts to understand the root causes of service provider pain points. The first part of this methodology is to identify the key business processes that drive the greatest improvements in financial performance. (See Figure 2.) The second part focuses on improving underlying business processes linked to improvements in key performance indicators (KPIs). The last part of the methodology is to conduct a comprehensive financial-, volume and cycle-, and defect analysis that allows service providers to determine how improvements in certain KPIs lead to desired outcomes. The end goal is to link business processes to costs and to determine how optimizing these costs leads to high-level business benefits. In many cases, cost optimization tactics involve the implementation of statistical process control and disciplined process management, which identify, and reduce the cost of defects and the unpredictability of specific business processes. These specific strategies are designed to drive the most cost out of individual business processes and ultimately improve the overall financial performance of the business.



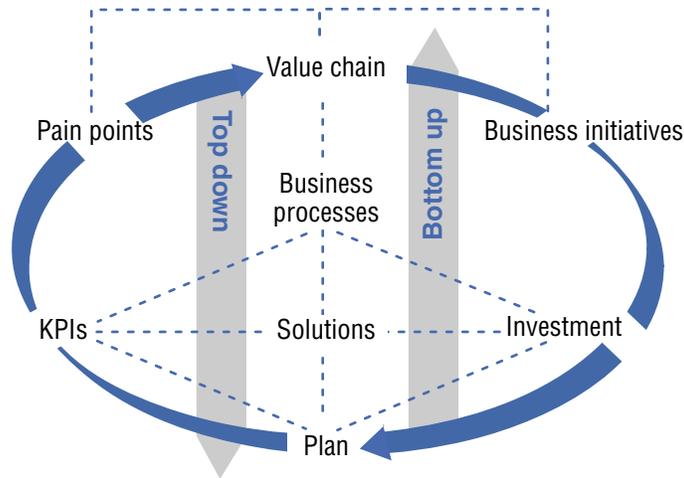
The benefit of this holistic, business value driven approach is that each initiative creates cost savings that can be reinvested in, or used to fund, the next cost transformation initiative. IBM's cost optimization methodology prioritizes cost optimization initiatives, quantifies the financial benefit of each initiative and creates a self-funding business case for telecoms to proceed with a comprehensive business cost transformation plan. This not only leverages IBM's proven approach for cost optimization, but also recognizes that any business transformation project requires both a top-down and bottom-up approach.

Using a top-down and bottom-up approach, IBM helps identify specific business pain points, links those pain points to business processes and develops a plan to fix the pain points at the business-process level.

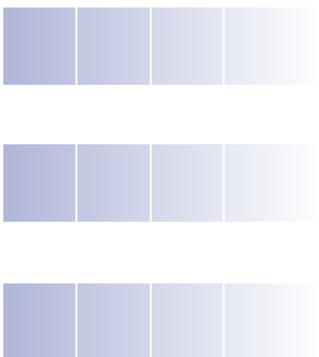
The top-down approach focuses on attaining specific business outcomes that will be rewarded by the financial markets. (See Figure 3.) This involves analysis of the telecom value chain, identification of service provider pain points and evaluation of business initiatives in progress. Once service provider pain points have been identified, it is easier to determine their underlying causes across business processes, activities and tasks. It is also easier to define the chain of command responsible for managing the pain points, from business-process or business-activity manager up through the executive office.

The bottom-up approach focuses on developing a business strategy to improve pain points across business processes, based on an assessment of KPIs, solutions and required investment. This process typically involves a roll-up-your-sleeves type of analysis with the business-process management team.

Figure 3. The cost optimization business case



Source: IBM Business Consulting Services analysis



IBM has experience through its own business transformation program and through the work we have done with service providers around the world.

By identifying service provider pain points, linking the pain points to specific business processes and then developing a plan to fix the pain point at the business-process level, service providers can accomplish two things:

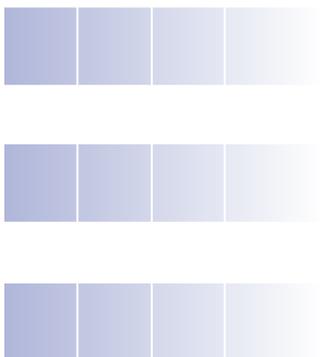
- Create financial results that will be rewarded by the market
- Align process-level cost optimization strategies with the business transformation goals of the company.

The critical point here is drawing the connection between the financial result and the improvement in the overall business process. IBM wants to ensure that service providers understand how improving certain KPIs impacts key business drivers, upon which the corporation is evaluated by the financial markets. This process draws a "golden thread" from the executive office to each business activity throughout the organization. It also helps telecom executives understand how linking business pain points to business processes can change overall business outcomes.

The IBM telecom cost optimization methodology

The goal of the IBM cost optimization methodology is to help build a business case for service providers to transform their cost structures by linking cost optimization initiatives to business outcomes. IBM's competencies in this area are based on the capabilities and experience of IBM Business Consulting Services consultants to analyze business processes and quantify potential business outcomes of specific initiatives. A second component is IBM's commitment to achieving these business outcomes and sharing in the benefit of success. IBM is confident in making this commitment because we have a tremendous amount of experience, not only through our own business transformation program, but also through the work we have done with service providers around the world to help them model and plan their cost transformation strategies.

The IBM cost optimization methodology is based on four main steps: financial analysis and competitive benchmarking, business driver analysis, business process analysis and financial outcome analysis.



By comparing best-in-class metrics with the performance of specific telecoms, IBM can establish the gap in financial performance driven by specific KPIs.

Financial analysis and competitive benchmarking

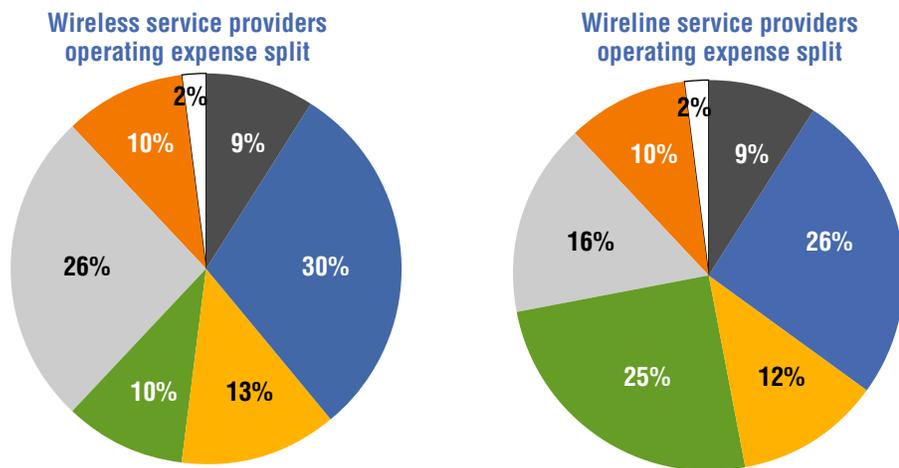
In order for service providers to understand where their potential for cost optimization lies, they need to gather detailed information of the main components of their operating expenses, and ascertain how each component can be improved through specific business processes and functions.

In-depth analysis of publicly available financial and operational information, and IBM's experience with a number of individual service providers through our Business Consulting Services practice, has had two key results:

- We can provide a typical operating expense breakdown for wireless and wireline service providers (see Figure 4.)
- We have determined how specific service providers rank in terms of key high-level KPIs, allowing IBM to determine best-in-class performance that can be segmented on a regional and service provider level.

By comparing best-in-class metrics with the performance of specific telecoms, IBM can establish the gap in financial performance driven by specific KPIs. Furthermore, IBM can determine the business processes that are primarily responsible for driving the gaps between certain KPIs and best-in-class operators.

Figure 4. Typical operating expense breakdowns for wireless and wireline service providers



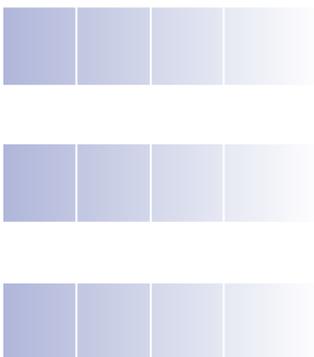
¹ Operating expenses = cost of goods sold (COGS) and selling, general and administrative expenses

² For wireline service providers, average values of Regional Bell Operating Companies/incumbent local exchange carriers and inter-exchange carriers have been taken

- COGS
- IT maintenance & operations
- Network maintenance & operations
- Sales & marketing
- Customer operations
- Cost of bad debt
- General and administrative expenses*

Source: IBM Business Consulting Services analysis

* Note: General and Administrative Expenses include executive office and strategic planners and accounting, external relations and legal, human resources, research and development, and other general and administrative expenses.



IBM has developed a telecommunications process map to help determine which business processes are responsible for driving specific KPIs.

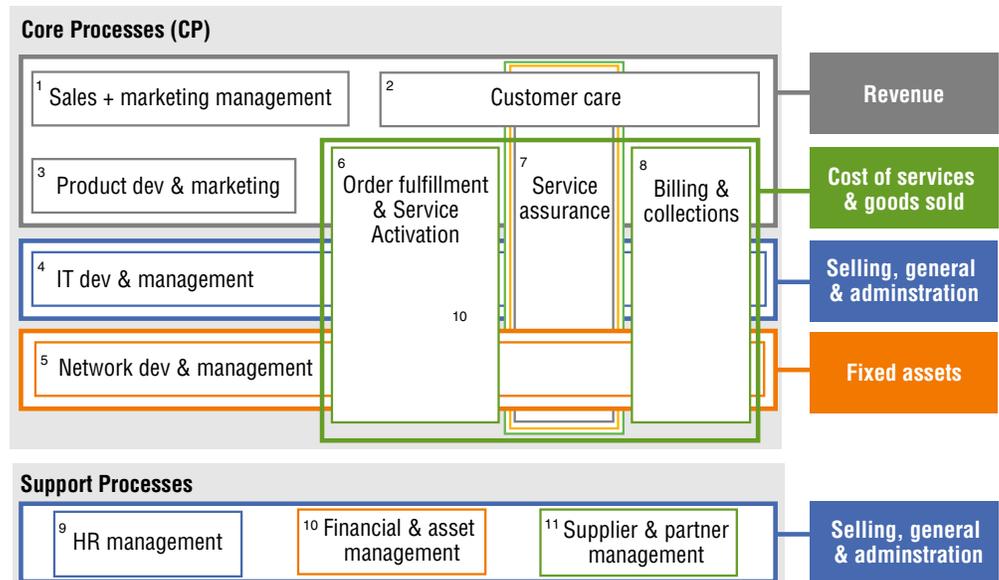
Business driver analysis

The next step in the cost optimization methodology is to determine which business processes are responsible for driving specific KPIs. To create a consistent view of the core processes within most service provider organizations, IBM has created a standardized telecommunications process map. (See Figure 5.) This telecommunications process map achieves four things:

- It breaks down a typical telecom organization into 11 core process areas
- It associates certain core process areas with key drivers of high-level financial performance
- It enumerates and standardizes the way specific business processes and functions contribute to the 11 core process areas
- It includes an exhaustive list of KPIs that measure effectiveness and efficiency of sub-core business processes and functions that drive performance in the core process areas.

This process map helps service providers to understand clearly how improvements in certain KPIs improve business processes that affect the core business areas and, ultimately, overall financial performance. This provides them with the proper information to identify and prioritize specific initiatives as part of their cost optimization strategies.

Figure 5. Telecommunications service provider process map



Source: IBM Business Consulting Services analysis. Adapted from the eTOM Business Process Framework

An operational analysis of the core process area brings benchmarks and metrics from other projects to evaluate the improvement opportunity existing within discrete process areas.

Business-process analysis

Upon the identification of the business process that, if improved, has the potential to provide the greatest overall benefit to financial performance, the next step is to understand how much the business process or function itself can be improved and what impact this improvement will have on the KPIs. This part of IBM's methodology contains a systematic operational analysis of the core process area, specifically:

- Identify the best- and worst-in-class KPIs for the sub-core business process
- Determine a diagnostic technique to understand the impacts of changes in the KPIs
- Identify common causes for poor KPI performance.

Cost optimization brings to the table benchmarks and metrics from other telecom cost transformation projects that enable IBM Business Consulting Services to evaluate the magnitude of improvement opportunity within discrete process areas.

Figure 6. Summary of IBM cost optimization diagnostic categories and techniques

Diagnostic categories	Diagnostic techniques	When to use
Financial analysis	Gap analysis	- Comparisons between competitors or departments/geographies - Quick quantification of benefits of change at the macro level
	Trend analysis	- Comparisons of performance over time - Validation that performance improvement gains can be met
	Ratio analysis	- Variable, demand-driven costs, very high or very low growth environments - Automatically adjusts for changes in spending pattern
	Variance analysis	- Fixed costs applications based on forecasted volumes - Drives organizations to focus on specific, well-defined targets
Volume & cycle analysis	Control analysis	- Track and measure changes in performance over time - Cycle (work and nonwork) and defect measurements
	White space/queues	- Any linear process with activities dependent on one another - Multistep processes throughout the business
	Fallout/suspense	- Identify cycle associated with orders, etc. that require manual effort - Assumes that at least a portion of the process is automated
Defect analysis	Histograms	- Understand the distribution of data and potential process performance - Diagram the distribution of events to assess the impact on process
	Control charts	- Comparisons between competitors or departments/geographies - Quick quantification of benefits of change at the macro level
	Pareto analysis*	- Separate the items that cause the most significant business issues - Use when data contains categories for analysis (org., cause code, etc.)
	Histograms	- Groups like items based on objective, measurable data - Identify central tendencies of a process to find others
	Ishikawa diagrams*	- Identify a meaningful relationship between causes and effects - Identifies root causes of performance inhibitors

Source: IBM Business Consulting Services analysis

* Note: The Pareto Principle states that only a "vital few" factors are responsible for producing most of the problems. This principle can be applied to quality improvement to the extent that a great majority of problems (80%) are produced by a few key causes (20%). Therefore, correcting the few vital causes results in the greatest improvement in quality. The Ishikawa Diagram is a graphic tool used to explore and display opinion about sources of variation in a process. The purpose of the Ishikawa Diagram is to arrive at a few key sources that contribute most significantly to the problem being examined. These sources are then targeted for improvement. The diagram also illustrates the relationships among the wide variety of possible contributors to the effect.

The financial outcome analysis of the IBM cost optimization methodology focuses on the financial impact of improvements to operational aspects of each business process.

Financial outcome analysis

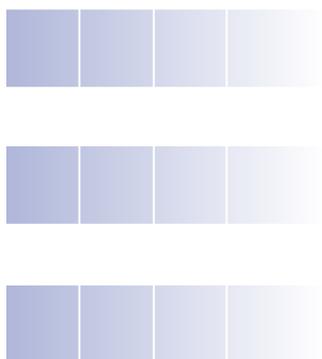
Whereas the business process analysis step of the IBM cost optimization methodology is focused on the operational aspects of each business process and function, the financial outcome analysis focuses on the financial impact of these improvements. These analytical techniques are tightly integrated with the business process analysis. (See Figure 6.) During this portion of the cost optimization methodology, IBM Business Consulting Services typically:

- Conduct intensive financial, volume and cycle, and defect analysis
- Quantify the impact of favorable changes in the KPIs at the business process level, line of business and financial performance levels.

This part of the cost optimization methodology typically results in a much better understanding of the business processes themselves and how certain defects or unpredictable elements in these processes drive poor KPIs. Therefore, one of the important aspects of the financial analysis is to establish business management controls to enhance monitoring of specific business processes and their KPIs.

Because this last step of the IBM cost optimization methodology quantifies the net benefit of specific initiatives at the financial performance level, it also closes the loop on the top-down and bottom-up cost reduction approaches.

In summary, the IBM cost optimization methodology identifies the problem area, determines the causes of the problem, assesses what can be done to fix the problem and then quantifies the value of correcting the problem. (See Figure 7.)



IBM is willing to link its compensation for implementing its cost optimization methodology to the outcomes, benefits and achievements of each initiative.

Developing a transformation program

Once service providers have identified optimal areas for cost reduction and determined how savings can be driven by improvements in processes that support those functions, they can develop a targeted program which includes a series of self-funding cost optimization initiatives to alleviate the challenges relating to constrained investment funds. (See Figure 8.)

- If the benefits of cost reduction initiatives can be quantified, then the net benefit of earlier initiatives can be reinvested and used to plan further initiatives. A critical advantage of this approach is its self-funding nature.
- Furthermore, many of the expenses associated with cost reduction initiatives can be linked to business outcomes and benefits. Therefore, subsequent initiatives should continue to improve the value or impact of earlier initiatives.

Because IBM is confident that our cost optimization methodology allows service providers to pursue this self-funding cost transformation approach successfully, IBM is willing to link its compensation for these services to the outcomes, benefits and achievements of each cost optimization initiative. IBM is willing to make this commitment because of experience, not only with our own business transformation, but also based on our success in working with service providers around the world.

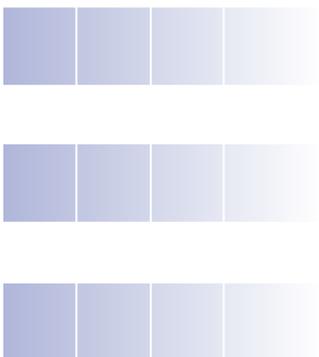


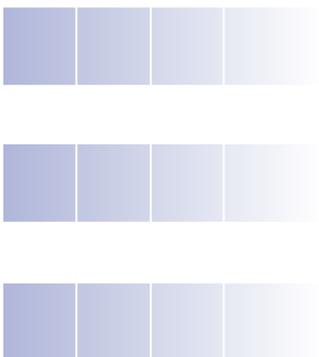
Figure 7. Summary of IBM cost optimization methodology

	Chain of command	Goals	Initiatives
1. Financial analysis and competitive benchmarking	- CEO/CFO	<ul style="list-style-type: none"> - Improve shareholder value - Identify causes for not performing better (the pain points) - Prioritize the pain point 	<ul style="list-style-type: none"> - Conduct high level financial analysis - Identify gaps between performance metrics and competitive benchmarks - Determine business process contributing to the gaps in performance or pain points
2. Business driver analysis	- CFO and line of business executive	<ul style="list-style-type: none"> - Identify how specific business processes contribute to overall financial performance - Identify categorical themes for business transformation, i.e. CRM, operations management, network management, SCM and enterprise management 	<ul style="list-style-type: none"> - Quantify how much core business processes are contributing to the pain points - Identify KPIs that measure the efficiency and effectiveness of the core business process - Determine how KPIs are affected by multiple core business processes
3. Business process analysis	- Line of business executive and process manager	<ul style="list-style-type: none"> - Understand the sub-core business processes that contribute to core business processes creating the pain points - Understand what activities and tasks in the subprocess contribute to the pain points 	<ul style="list-style-type: none"> - Identify best- and worst-in-class KPIs for the sub-core business process - Determine diagnostic technique to understand the impacts of changes in the KPIs - Identify common causes for poor KPI performance
4. Financial outcome analysis	- Process manager, activities/task managers and consultants	<ul style="list-style-type: none"> - Analyze the business process to understand defect and unpredictable elements - Create business information and establish management control to better monitor the business process 	<ul style="list-style-type: none"> - Conduct intensive financial, volume and cycle, and defect analysis - Quantity impact of favorable changes in the KPIs at the business process, line of business and financial performance levels

CRM (Customer Relationship Management)

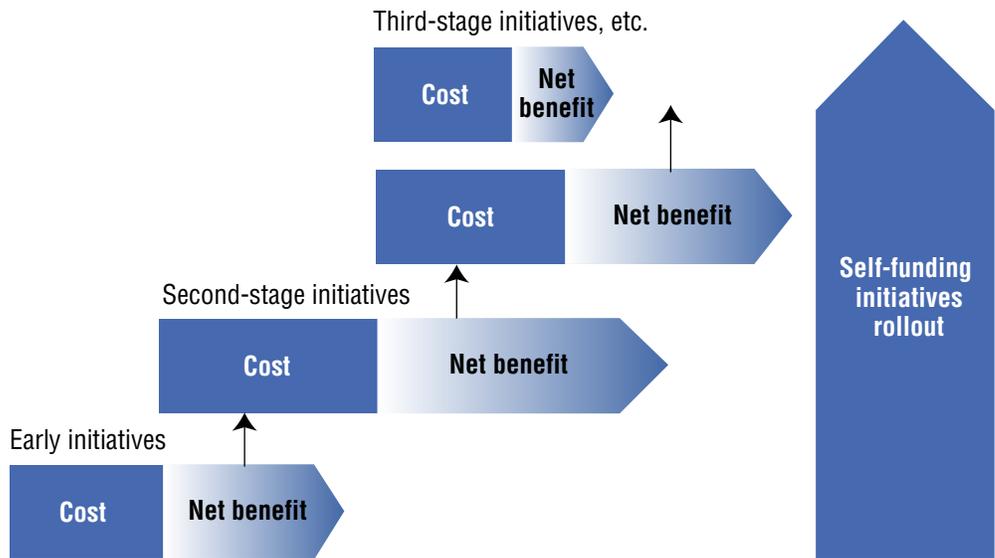
SCM (Supply Chain Management)

Source: IBM Business Consulting Services analysis



The main outcomes of IBM's cost optimization methodology are increased quantifiable benefits, improved cost efficiency and reduced investment and risk.

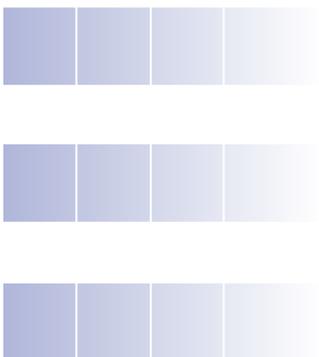
Figure 8. Developing a transformation program



Source: IBM Business Consulting Services analysis

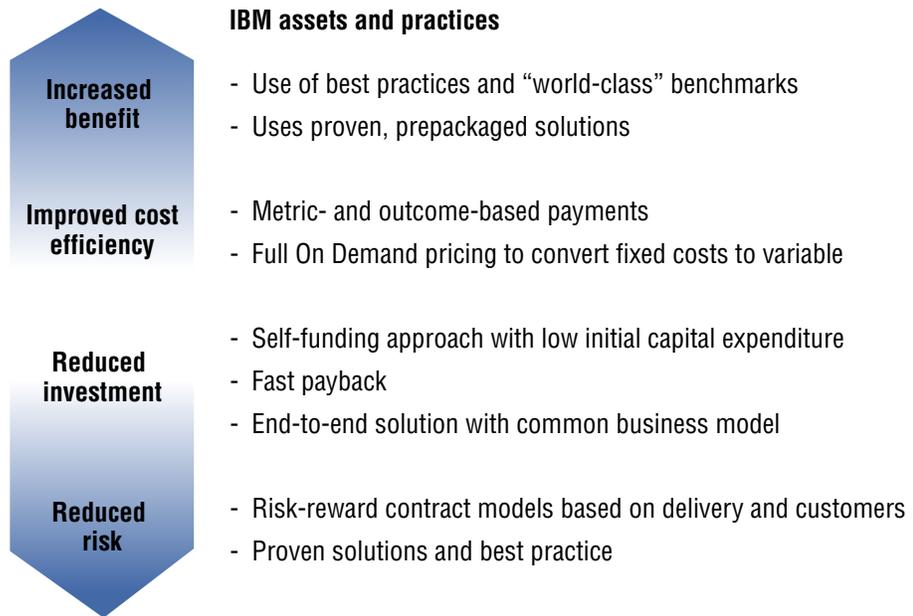
IBM solutions for service provider cost optimization

IBM has developed a solutions portfolio that fuses traditional consulting practices with technology-enabled business change. The combination of in-depth experience in the telecom business and investment in cost optimization assets allows service providers to address not only the short-term, bottom-line benefits of cost optimization, but also a longer term, sustainable, structural organizational transformation. The IBM methodology was designed specifically to help service providers make cost optimization decisions today that will drive both short- and long-term value. The main outcomes of the IBM methodology are increased quantifiable benefits, improved cost efficiency and reduced investment and risk—all of which are tied into the cost optimization methodology. (See Figure 9.)



Using IBM consulting and implementation services, hardware, software and best-in-class partner applications, C.O.S.T. helps service providers reengineer and streamline core business processes.

Figure 9. Benefits of telecom cost optimization methodology

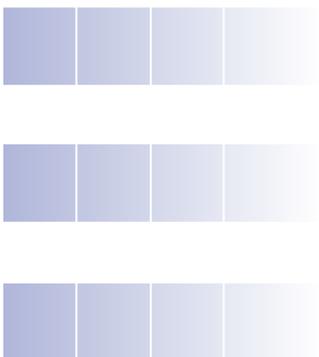


Source: IBM Business Consulting Services analysis

The C.O.S.T. Solution

IBM developed its cost optimization methodology as the foundation of its Cost Optimization and Strategic Transformation (C.O.S.T.) solution set. C.O.S.T. was developed to provide a critical set of tools to help service providers marshal the resources to compete effectively in both today’s telecom environment and the complex environment of tomorrow. IBM C.O.S.T. also brings together the full range of IBM’s capabilities to help optimize service provider operating expenses while concurrently addressing the need to improve capital spending efficiency. Incorporating IBM consulting and implementation services, hardware, software and best-in-class partner applications, C.O.S.T. also helps service providers to leverage technology and solutions to reengineer and streamline core business processes in five core business functions:

- Customer relationship management
- Supply chain management
- Enterprise management
- Operations management
- Network management



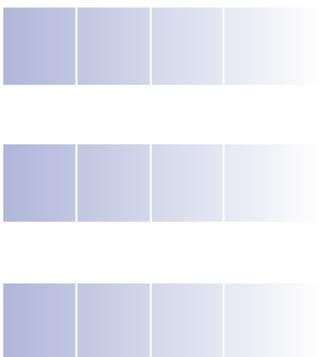
C.O.S.T. yields a number of compelling benefits to telecom service providers: it is self-funding, focused on business outcomes and a technology-fueled transformation.

Each of these five core business functions is linked to specific core process areas in the telecom process map. This is what creates the strong link between the methodology and the IBM C.O.S.T. solution portfolio.

C.O.S.T. is designed and delivered by IBM Global Services, leveraging IBM Business Transformation and IT Value Management methodologies and experience. As a comprehensive solution, it targets organization, business process and systems issues concurrently—helping to achieve cost reductions across the entire value chain. C.O.S.T. encompasses a set of cost optimization initiatives with defined business outcomes, aligned with the KPIs by which the stakeholders are measured.

Because of its incorporation of the IBM cost optimization methodology, C.O.S.T. can provide a number of compelling benefits to telecom service providers:

- **Self-funding.** As service providers undertake a cost optimization transformation program, the incremental benefits they receive for each initiative are linked to a series of business cases that fund subsequent cost optimization projects. This takes a vector approach to transformation because a broad strategic direction is set at the beginning of the overall process. It also addresses the service provider's need to adopt a more comprehensive enterprisewide approach to cost optimization.
- **Focused on business outcomes.** IBM provides some level of risk management for the service providers because we have invested our own money and extensive industry expertise in various aspects of the C.O.S.T. solution. IBM created this structured analysis and diagnostic process to quantify the benefit of certain business process initiatives at the financial performance level. When service providers buy a contract that provides these types of business-outcome-based results, a significant amount of the risk in undertaking the project is offset.
- **Technology-fueled transformation.** In addition to optimizing business processes, there are steps to be taken beyond those that best leverage IBM's technology portfolio to enable a more comprehensive business structural transformation. IBM has created a series of e-business initiatives to address specific business transformation opportunities at the business activities and business task levels from a technology perspective. Each core and non-core business process in the cost optimization methodology is supported by a series of IBM e-business solutions that are pre-designed to assist service providers in transitioning to the next generation of service, applications and information technology. This allows a gradual build toward a modernized telecom IT infrastructure and verifies that virtually every business transformation initiative undertaken will be compatible by virtue of using open-standards-based computing technology.



IBM has developed a comprehensive approach to help telecom executives navigate the complexities of an enterprisewide cost transformation effort. IBM is well positioned to carry out this type of strategic transformation.

Conclusion

In order for service providers to compete successfully both today and in the future, they must dramatically transform their cost structures. There are two dimensions to this cost transformation: first, to reduce the costs associated with specific customers and products, and second, to restructure the business to become more readily adaptable to changing market conditions. Considering the complexity and magnitude of this transformation, service providers not only need to develop a comprehensive enterprisewide approach to transformation, but also to break down this transformation into incremental cost optimization initiatives and projects that work towards overall business goals. At the same time, telecom executives need to figure out a way to fund this transformation at a time when financial markets are not rewarding this type of high-cost, long-term investment in the business. IBM has developed a comprehensive, asset-backed, outcomes-based approach to help telecom executives navigate the complexities of an enterprisewide cost transformation effort. IBM is uniquely positioned with the consulting and technology-fueled solutions, skills and hands-on experience to carry out this type of enterprisewide strategic transformation end-to-end. Because IBM is confident that we can help our telecom clients achieve their cost transformation goals, IBM is willing to share directly in the risk and reward of each service provider's cost transformation journey.



About IBM Business Consulting Services

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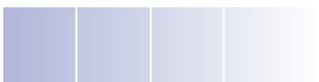
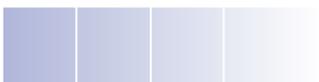
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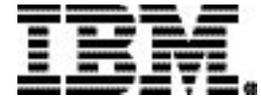
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